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JAN 2-1917

Crouse-Hinds

Imperial Flood Light Projectors

TYPE SDA TYPE SDX

BULLETIN NO. 301

EFFECTIVE NOVEMBER 6, 1916



Type SDA



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Crouse-Hinds Imperial Flood Light Projectors

Type SDA

General

The art of flood-lighting, to bring out during darkness the daytime beauty of architecture and the commercial value of painted signs, has become a well established branch of illuminating engineering. In fact, the proper application of the principles of flood-lighting often enhances the beauty of a building, statue, monument, etc., or makes commercial advertising more effective, owing to the contrast with the surrounding darkness.

Flood-lighting can be used effectively for building exteriors, statues, monuments, bill-boards, signs on walls, chimneys or water-tanks, flags, pageants, athletic stadiums, bathing beaches, etc. The use of flood light projectors for outside work will enable a contractor to operate effectively a "night shift", when necessary. Railroad yards, coal docks and piers are lighted with these projectors and worked at daytime efficiency, and in a number of instances fire trucks are equipped with them.

Lamps

Two sizes of these projectors are in general use, one with a 12-inch and the other with a 16-inch diameter reflector. The 12-inch projector is designed particularly to take the 250-watt, 105 to 130-volt Mazda C flood light lamp, but smaller lamps may be used when the projector is located near the object to be flood-lighted. The 16-inch projector is designed to use either a 250-watt or a 500-watt, 105 to 130-volt Mazda C flood light lamp, but, as in the case of the 12-inch projector, smaller lamps can be used. This 16-inch projector is regularly equipped with a mogul receptacle for the 500-watt lamp, but, when so specified, a medium screw receptacle will be furnished. A medium screw base lamp may also be mounted in the mogul receptacle by using an adaptor.

Spread of Beam

The focus type flood light lamp has its filament concentrated into a very small space, and, by locating this filament at the focal point of the reflector, a long, narrow beam of light (about 6 degrees divergence) will be obtained. Such a beam of light is used where the object to be illuminated is located at a considerable distance from the projector. A beam of light of 6 degrees divergence will illuminate a circular spot 10 feet in diameter at 100 feet from the projector, and at a thousand feet the area illuminated will be a spot 100 feet in diameter. When the object to be illuminated is large, compared with the distance it is away from the projector, the beam of light may be spread to 20 degrees divergence, by moving the lamp back so

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that its filament is located slightly behind the focal point of the reflector. A knurled thumb wheel, on the back of the projector, furnishes means for moving the lamp forward or backward as desired. When the beam is spread to 20 degrees it will illuminate a circle 35 feet in diameter at 100 feet, or a circle 175 feet in diameter at 500 feet. The edge of the beam is, of course, not sharply defined. For flood-lighting, the edge is considered the point where the intensity of illumination decreases to 10 per cent. of its maximum value. If the beam is spread more than 20 degrees, the center begins to get dark, and, if carried much beyond this figure, the center becomes entirely black.

Installation

Type SDA projector is mounted on a swivel base so that it may be turned in any direction, and it is also equipped with a quadrant which permits the beam to be elevated or depressed so that it may be trained perfectly upon the object to be illuminated. It is not practicable, however, to operate at such a depression as brings the base of the incandescent lamp directly over the lamp filament. The casing is thoroughly weather-proof and is ventilated to dissipate the heat given off by the lamp.

Adjustment

The projector should be located at the most convenient place, 50 to 500 feet away from the object to be illuminated, and the beam of light trained directly upon it. The beam may then be spread so that the object is uniformly illuminated. This adjustment is accomplished by turning the knurled thumb wheel on the back of the case.

When the surface to be flood-lighted requires more than one projector, it is best to install the projectors at different points, as light coming from two directions will do away with any sharp shadows cast by the ornamentation of the building.

No definite statement can be made regarding the number of projectors required to illuminate a given area, as much depends upon local conditions. The available locations for installing projectors, the color of the object, contrast between it and the background, the proximity of other sources of illumination, etc., all influence the flood-lighting. In general, two to ten foot-candles will be required, or this can be expressed as 0.2 to 5.0 watts per square foot of surface illuminated. White objects viewed against black backgrounds require the minimum, while black, green or brick red objects call for the maximum limit in order that they may "stand out" properly at night.

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Crouse-Hinds Imperial Flood Light Projectors

Type SDA, 12-inch

Type SDA, 16-inch

Mounted on Swivel Base and Quadrant



Front View



Back View

Type SDA Flood Light Projector

Type SDA 12-inch Flood Light Projectors

Take 250-watt, 105 to 130-volt Mazda C Lamp

Cat. No.	Style of Reflector	Net Weight	Shipping Weight	List Price Each
28621	Projector with crystal glass mirror reflector	26 lbs.	43 lbs.	\$36.00
28622	Projector with nickel-plated copper reflector	23 "	40 "	32.00
28623	Projector with polished aluminum reflector	23 "	40 "	31.00

Type SDA 16-inch Flood Light Projectors

*Take 500-watt, 105 to 130-volt Mazda C Lamp

28624	Projector with nickel-plated copper reflector	32	55	\$39.00
28625	Projector with polished aluminum reflector	32	55	37.50

*If specified on order, this projector will be furnished with a medium screw receptacle which permits the use of 250-watt Mazda Lamp.

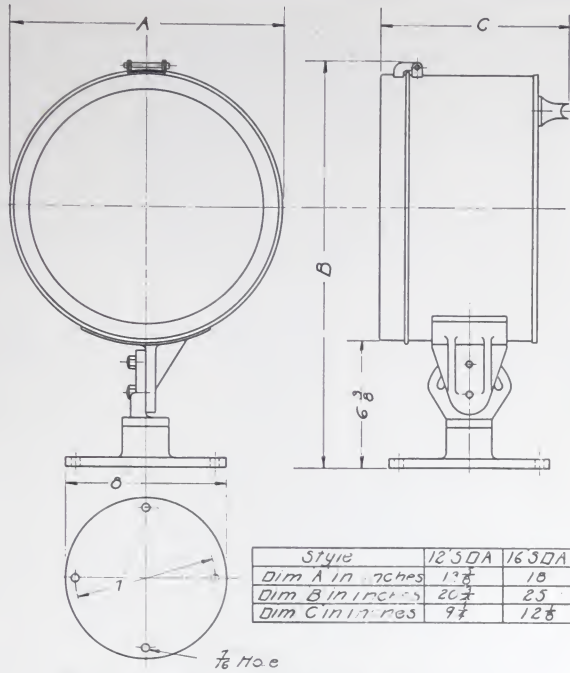
Shipping dimensions for 12-inch projector, 14x18x25 inches, for 16-inch projector, 16x22x30 inches.

Prices do not include Incandescent Lamp. See page 7.

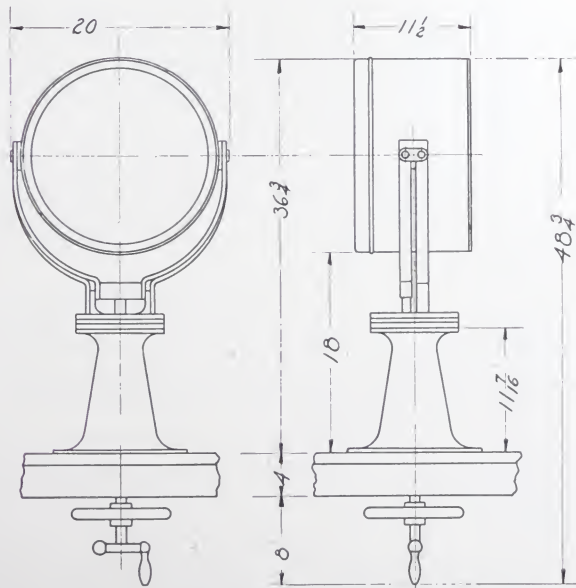
Crouse-Hinds Imperial Projectors

Type SDA

Type SDX



Type SDA Flood Light Projectors



Type SDX Projector

Crouse-Hinds Imperial Projectors

Type SDX

Pilot House Control

Those who operate boats on rivers, harbors and lakes have long felt the want of a modified form of searchlight, which, while giving a less intense light than the regular arc lamp, could still be depended upon for adequate illumination for "picking up" landings, channel markers, other boats and obstructions to navigation, while yet at a distance of from 1500 to 2000 feet.

Type SDX Imperial incandescent projector exactly meets these requirements, and has, in addition to less initial cost and maintenance charges, other desirable features which recommend it for use where a powerful searchlight is not needed.

This projector is arranged for mounting on the pilot house roof. An operating mechanism, which extends through the roof to a point within easy reach of the pilot, makes it possible for the latter to control with one hand the direction of the light beam, without moving from his position at the wheel. He can elevate or depress the beam 45 degrees from the horizontal, giving a total possible up and down range of 90 degrees; while horizontally, he can revolve the projector at will in either direction.

In material and construction, as well as in design, type SDX projector is the product of careful study and demonstration. The case is alloy-coated sheet iron, which gives the maximum protection against rust. All exposed parts are covered with black japan, dipped and baked on. The door fits tightly to the casing, and the joint is made absolutely moisture-proof by a rubber gasket. The reflector is copper, heavily nickel-plated. This provides a reflecting surface practically impervious to the corroding action of salt water.

The projector is mounted on a cast iron pedestal, black-japaned the same as the headlight casing. This elevation allows the projector, when mounted near the front end of a pilot house roof, to be depressed to its greatest degree without sustaining loss of illuminating power through obtrusion of the roofing into the light beam.

Another feature of type SDX projector is that there are no loose lead wires to get caught and broken in the operation of the mechanism, or in any other way. This is so because circuit connections are made by contact plates on the pedestal. These contact plates make possible the free turning of the projector, referred to above.

Frequently, inadequate lighting at piers delays and sometimes makes hazardous the loading and unloading of passengers and freight. Where a type SDX projector is mounted on a boat, ample illumination is secured by turning the light beam of the projector in the direction of the gangways.

When this projector was designed, it was intended that a 110-volt, 500-watt Mazda C lamp be used in it, but the adjustable receptacle makes it possible to bring to the focal point of the reflector any lamp having a G40 bulb, or smaller.

In detail of construction other than arrangements for mounting, type SDX projector is identical with type SDA, described and listed in the preceding pages.

Crouse-Hinds Imperial Projectors

Type SDX

Pilot House Control



Type SDX 16-inch Projectors

Take 500-Watt Focus Type Mazda C Lamp

Reflector Dimensions	Style of Reflector	Cat. No.	Shipping Weight	List Price Each
Dia. 16"	Projector with Nickel-Plated Copper			
Focus 2 $\frac{3}{4}$ "	Reflector.....	28630	125 lbs	\$105.00

Net weight, 75 lbs. Shipping dimensions, 54x25x18 inches.

Prices do not include incandescent lamp.

Control wheel, handle and stem are iron. If brass is desired, add \$15.00 to list price.

Lamps for Types SDA and SDX Projectors

Watts	Volts	Bulb	Light Center Length	Base	Net Price Each
250	105-130	G-30	3 $\frac{1}{8}$	Medium Screw	\$2.70
500	105-130	G-40	4 $\frac{1}{4}$	Mogul Screw	4.50

Above information on incandescent lamps is the latest available from the lamp manufacturers, but the Crouse-Hinds Company does not guarantee the prices or other data.

Complete information, as given above, should be placed on each requisition for lamps to the jobber, and in every case it should be specified that the lamps are to be used for flooding-lighting.

Crouse-Hinds Imperial Projectors

Type SDA

Type SDX



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